

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

The listing is based on the last entered amendment of October 31, 2003:

Listing of the Claims:

Claim 1 (currently amended): A pharmaceutical composition for application at a biodegradable plate-containing site requiring new bone[,] ~~or cartilage or connective tissue~~ formation in a subject, comprising a plurality of bone marrow stromal cells (MSCs) and a pharmaceutically acceptable polymer,

wherein the MSCs are isolated from the subject; are transduced *in vitro* after isolation from the subject with ~~wherein the MSCs comprise a replication-deficient viral~~ vector comprising a DNA sequence encoding BMP-2 operably linked to a promoter, and are applied at the biodegradable plate-containing site and a pharmaceutically acceptable polymer.

Claim 2 (original): The composition as recited in Claim 1 wherein the polymer is selected from a group consisting of alginate and collagen.

Claim 3 (original): The composition as recited in Claim 1 wherein the MSCs are present in a concentration of about 50×10^6 per ml of the polymer.

Claim 4 (previously presented): The composition as recited in Claim 1 wherein the polymer is collagen type I.

Claim 5 (currently amended): A method of enhancing new bone[,] ~~or cartilage or connective tissue~~ formation in a subject, comprising:

- a. obtaining a plurality of bone marrow stromal cells (MSCs) from a the subject;
- b. transducing the MSCs of step a) with a replication-deficient viral vector comprising a DNA sequence encoding BMP-2 operably linked to a promoter to generate BMP-2 protein producing MSCs;
- c. applying a biodegradable plate to a site requiring new bone[,] or cartilage ~~or connective tissue~~ formation on the subject; and
- d. applying a composition comprising the BMP-2 protein producing MSCs and a pharmaceutically acceptable polymer to the site,

such that new bone[,] or cartilage ~~or connective tissue~~ formation is enhanced.

Claim 6 (currently amended): The method as recited in Claim 5 wherein the ~~DNA sequence encoding BMP-2 is transferred via~~ replication-deficient viral vector is an adenovirus.

Claim 7 (cancelled)

Claim 8 (previously presented): The method as recited in Claim 5 wherein the protein producing MSCs are topically applied in a concentration of about 50×10^6 per ml of a pharmaceutically acceptable polymer and produce an effective amount of the protein.

Claims 9-10 (cancelled)

Claim 11 (previously presented): The composition of claim 1 wherein the composition is a gel.

Appl. No. 09/837,217
Response of April 8, 2005
Reply to Notice dated March 29, 2005

Claim 12 (previously presented): The method of claim 5 wherein the composition is a gel.

Claim 13 (previously presented): The composition of claim 1 wherein the biodegradable plate comprises poly(lactic acid) (PLLA).

Claim 14 (previously presented): The method of claim 5 wherein the biodegradable plate comprises poly(lactic acid) (PLLA).